

What is claimed is:

1. A soft focus lens barrel comprising:

a stationary barrel to be secured to a camera body;

first, second, third and fourth lens group frames

5 which hold a first lens group, a second lens group, a third lens group and a fourth lens group, respectively, said first through fourth lens group frames being supported by the stationary barrel so as to move in an optical axis direction;

10 a distance operation ring, a soft focus operation ring, and an image surface operation ring, each being supported by the stationary barrel so as to independently rotate;

a focus guide mechanism which varies a resultant  
15 focal position of the first through fourth lens groups by moving the first and second lens group frames in the optical axis direction without varying the distance between the first and second lens group frames in accordance with a rotation of said distance operation ring;

20 a spherical aberration guide mechanism which varies spherical aberrations produced by the first through fourth lens groups by moving the third and fourth lens group frames in the optical axis direction along predetermined paths, in accordance with a rotation of said soft focus operation  
25 ring; and

a field curvature guide mechanism which varies a curvature of field produced by the first through fourth lens groups by solely moving the first lens group frame in the optical axis direction, in accordance with a rotation of said image surface operation ring.

2. The soft focus lens barrel according to claim 1, wherein the second, third and fourth lens group frames are supported so as to move linearly in the optical axis direction but not to rotate about the optical axis, said first lens group frame being supported so as to rotate and axially move relative to the second lens group frame.

3. The soft focus lens barrel according to claim 2, wherein the first lens group frame and the image surface operation ring are connected to each other so as to move relative to each other in the optical axis direction and rotate together, and wherein a cam mechanism is provided between the first lens group frame and the second lens group frame to relatively move the first and second lens group frames in the optical axis direction when a relative rotation occurs between the first and second lens group frames.

4. The soft focus lens barrel according to claim 3, wherein the distance operation ring and the second lens group frame are associated with each other so that the second lens group frame is moved linearly in the optical

axis direction in accordance with a rotation of the distance operation ring, said first lens group frame being engaged with the second lens group frame so that the first lens group frame is moved together with the second lens group frame in the optical axis direction when the image surface operation ring is not rotated.

5. A soft focus lens barrel comprising:

a stationary barrel secured to a camera body;

first, second, third and fourth lens group frames which hold a first lens group, a second lens group, a third lens group and a fourth lens group, respectively, said first through fourth lens group frames being supported by the stationary barrel so as to move in an optical axis direction;

a distance operation ring, a soft focus operation ring, and an image surface operation ring, each being supported by the stationary barrel so as to independently rotate;

a focus guide mechanism which varies a resultant focal position of the first through fourth lens groups by moving the first and second lens group frames in the optical axis direction without varying the distance between the first and second lens group frames in accordance with a rotation of said distance operation ring;

a spherical aberration guide mechanism which varies

spherical aberrations produced by the first through fourth lens groups by moving the third and fourth lens group frames in the optical axis direction along predetermined paths, in accordance with a rotation of said soft focus operation  
5 ring; and

a field curvature guide mechanism which varies a curvature of field produced by the first through fourth lens groups by moving the first lens group frame and the second lens group frame at predetermined paths in the  
10 optical axis direction, in accordance with a rotation of said image surface operation ring.

6. The soft focus lens barrel according to claim 5, wherein the focus guide mechanism is provided with a focusing movement frame which is moved linearly in the  
15 optical axis direction in accordance with a rotation of the distance operation ring, said first lens group frame being supported so as to move relative to the focusing movement frame, said second lens group frame being supported by the first lens group frame so as to move only  
20 linearly in the optical axis direction, so that when no relative rotation of the first lens group frame to the focusing movement frame takes place, the first and second lens group frames are moved in the optical axis direction together with the focusing movement frame.

25 7. The soft focus lens barrel according to claim 6,

wherein the first lens group frame and the image surface operation ring are connected to each other so as to move relative to each other in the optical axis direction and rotate together, wherein a first cam mechanism is provided  
5 between the first lens group frame and the focusing movement frame to relatively move the frames in the optical axis direction when a relative rotation occurs between the first lens group frame and the focusing movement frame, and wherein a second cam mechanism is provided between the  
10 second lens group frame and the focusing movement frame to relatively move the frames in the optical axis direction when a relative rotation occurs between the second lens group frame and the focusing movement frame.